TABLE OF CONTENTS

WORKING DRAFT Proponent's Environmental Assessment (PEA) Checklist for Transmission Line and Substation Projects

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Coversheet

☐ Should be a single sheet with the following information:

- Title "Proponent's Environmental Assessment";
- Proceeding for which the PEA has been prepared;
- Docket number of the proceeding; and
- Name, address, and telephone number of the project proponent.

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Table of Contents

☐ The format of the PEA document should include, but is not limited to, the following[1]:

- Table of Contents
- PEA Summary (e.g., Executive Summary)
- Project Objectives
- Project Description
- Environmental Setting
- Environmental Impact Assessment Summary (e.g., Environmental Impacts and Mitigation Measures)[2]; also includes:
  - Cumulative Impacts
- Detailed Discussion of Significant Impacts; also includes:
  - Mitigation Measures to Minimize the Significant Effects
  - Project Alternatives, if appropriate[3]
  - Growth-Inducing Impacts, if appropriate
- Federal permits/actions requiring NEPA review
- List of Preparers[4]
- Lists of Tables and Figures and Appendices (if any)

1 References for each section should be included at the end of the respective section.
2 Environmental Setting, Impacts and Mitigation Measures may be discussed in one section
3 Alternatives and Growth-Inducing Impacts discussions may not be required for projects that have no significant impacts.
4 The PEA shall include a list of persons, their organization and their qualification, responsible for compiling the detailed information for each section

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Chapter 1: PEA Summary

☐ Typically from two to ten pages in length depending on complexity of the project and the number and significance of the projects impacts.

☐ PEA summary should include, but is not limited to, the following:

- the major conclusions of the PEA;
- any areas of controversy;
- any major issues that must be resolved including the choice among reasonably feasible alternatives and mitigation measures, if any;
- a description of inter-agency coordination, if any; and
- a description of public outreach efforts, if any.

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Chapter 2: Project Purpose and Need and Objectives

2.1 Overview

This section lists the information necessary under CEQA to describe the objectives, purpose and need for the Proposed Project. Additional information regarding purpose and need *may* be required from the Applicant to be included in its application to the CPUC in accordance with the Public Utilities Code CPUC General Order 131-D.

☐ Generally not more than two pages in length, except where significant or potentially significant project impacts have been identified. Analysis of project objectives, purpose and need must be sufficiently detailed to permit the Commission to independently evaluate the project need and benefits in order to accurately consider them in light of the potential environmental impacts.

☐ Explanation of the objective(s) and/or Purpose and Need for implementing the Proposed Project.

2.2 Project Objectives

☐ Analysis of the reason why attainment of these objectives is necessary or desirable. Such analysis must be sufficiently detailed to inform the Commission in its independent formulation of project objectives which will aid any appropriate CEQA alternatives screening process.

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Chapter 3: Project Description

3.1 Project Location

☐ Geographical Location: County, City (provide project location map(s)).

☐ General Description of Land Uses within the project site (e.g., residential, commercial, agricultural, recreation, traverses vineyards, farms, open space, number of stream crossings, etc.).

☐ Describe if the Proposed Project is located within an existing property owned by the Applicant, traverses existing rights of way (ROW) or requires new ROW. Give the approximate area of the property or the length of the project that is in an existing ROW or which requires new ROWs.

3.2 Existing System

☐ Describe the local system to which the Proposed Project relates; include all relevant information about substations, transmission lines and distribution circuits. ***Note: regional system maps would remain confidential for security reasons.***

☐ Provide a schematic diagram and map of the existing system.

☐ Provide a schematic diagram that illustrates the system as it would be configured with implementation of the Proposed Project.

3.3 Project Objectives

Can refer to Chapter 2, Project Purpose and Need, if already described there.

3.4 Proposed Project

☐ Describe whole of the Proposed Project. Is it an upgrade, a new line, new substations, etc.?

☐ Describe how the Proposed Project fits into the Regional system. Does it create a loop for reliability, etc.?

☐ Describe all reasonably foreseeable future phases, or other reasonably foreseeable consequences of the Proposed Project.

☐ Provide capacity increase in MW. If the project does not increase capacity, state it.

☐ Provide GIS (or equivalent) data layers for the Proposed Project preliminary engineering including estimated locations of all physical components of the Proposed Project as well as those related to construction. For physical components, this could include but is not limited to the existing components (e.g., ROW, substation locations, poles, etc.) as well as the proposed pole locations, transmission lines, substations, etc. For elements related to construction include: proposed or likely lay-down areas, work areas at the pole sites, pull and tension sites, access roads (e.g., temporary, permanent, existing, etc.), areas where special construction methods may need to be employed, areas where vegetation removal may occur, areas to be heavily graded, etc. More details about this type of information are provided below.

3.5 Project Components

3.5.1 Transmission Line

☐ What type of line exists and what type of line is proposed (e.g., single-circuit, double-circuit, upgrade 69 kV to 115 kV).

☐ Identify the length of the upgraded alignment, the new alignment, etc.

☐ Would construction require one-for-one pole replacement, new poles, steel poles, etc.?

☐ Describe what would occur to other lines and utilities that may be collocated on the poles to be replaced (e.g., distribution, communication, etc.).

3.5.2 Poles/Towers

☐ Provide the following information for each pole/tower that would be installed and for each pole/tower that would be removed:

- Unique ID number to match GIS database information.
- Structure diagram and, if available, photos of existing structure. Preliminary diagram or "typical" drawings and, if possible, photos of proposed structure. Also provide a written description of the most common types of structures and their use (e.g., Tangent poles would be used when the run of poles continues in a straight line, etc.). Describe if the pole/tower design meets raptor safety requirements.
- Type of pole (e.g., wood, steel, etc.) or tower (e.g., self-supporting lattice).
- For poles, provide "typical" drawings with approximate diameter at the base and the tip; for towers, estimate the width at base and top.
- Identify typical total pole lengths, the approximate length to be embedded, and the approximate length that would be above ground surface; for towers, identify the approximate height above ground surface and approximate base footprint area.

☐ Describe any specialty poles or towers; note where they would be used (e.g., angle structures, heavy angle lattice towers, stub guys); make sure to note if any guying would likely be required across a road.

☐ If the project includes pole-for-pole replacement, describe the approximate location of where the new poles would be installed relative to the existing alignment.

☐ Describe any special pole types (e.g., poles that require foundations, transition towers, switch towers, microwave towers, etc.) and any special features.

3.5.3 Conductor/Cable

3.5.3.1 Above-Ground Installation

☐ Describe the type of line to be installed on the poles/tower (e.g., single circuit with distribution, double circuit, etc.).

☐ Describe the number of conductors required to be installed on the poles or tower and how many on each side including applicable engineering design standards.

☐ Provide the size and type of conductor (e.g., ACSR, non-specular, etc.) and insulator configuration.

☐ Provide the approximate distance from the ground to the lowest conductor and the approximate distance between the conductors (i.e., both horizontally and vertically) Provide specific information at highways, rivers, or special crossings.

☐ Provide the approximate span lengths between poles or towers, note where different if distribution is present or not if relevant.

☐ Describe if other infrastructure would likely be collocated with the conductor (e.g., fiber optics, etc); if so, provide conduit diameter of other infrastructure.

3.5.3.2 Below Ground Installation [Note: provide the best information available in the absence of a detailed geo-technical study.]

☐ Describe the type of line to be installed (e.g., single circuit cross-linked polyethylene-insulated solid-dielectric, copper-conductor cables).

☐ Describe the type of casing the cable would be installed in (e.g., concrete-encased duct bank system); provide the dimensions of the casing.

☐ Provide an engineering ‘typical’ drawing of the duct bank and describe what types of infrastructure would likely be installed within the duct bank (e.g., transmission, fiber optics, etc.).

3.5.4 Substations

☐ Provide “typical” Plan and Profile views of the proposed substation and the existing substation if applicable.

☐ Describe the types of equipment that would be temporarily or permanently installed and provide details as to what the function/use of said equipment would be. Include information such as, but not limited to: mobile substations, transformers, capacitors, and new lighting.

- ☐ Provide the approximate or "typical" dimensions (width and height) of new structures including engineering and design standards that apply.
- ☐ Describe the extent of the Proposed Project. Would it occur within the existing fence line, existing property line or would either need to be expanded?
- ☐ Describe the electrical need area served by the distribution substation.

3.6 Right-of-Way Requirements

- ☐ Describe the ROW location, ownership, and width. Would existing ROW be used or would new ROW be required?
- ☐ If new ROW is required, describe how it would be acquired and approximately how much would be required (length and width).
- ☐ List properties likely to require acquisition.

3.7 Construction

3.7.1 For All Projects

3.7.1.1 Staging Areas [Note: while not all potential local site staging areas will be known prior to selection of a contractor, it is expected that approximate area and likely locations of staging areas be disclosed.]

- ☐ Where would the main staging area(s) likely be located?
- ☐ Approximately how large would the main staging area(s) be?
- ☐ Describe any site preparation required, if known, or generally describe what might be required (i.e., vegetation removal, new access road, installation of rock base, etc.).
- ☐ Describe what the staging area would be used for (i.e., material and equipment storage, field office, reporting location for workers, parking area for vehicles and equipment, etc.).
- ☐ Describe how the staging area would be secured, would a fence be installed? If so, describe the type and extent of the fencing.
- ☐ Describe how power to the site would be provided if required (i.e., tap into existing distribution, use of diesel generators, etc.).
- ☐ Describe any grading activities and/or slope stabilization issues.

3.7.1.2 Work Areas [Note: understanding that each specific work area may not be determined until the final work plan is submitted by the construction contractor, estimate total area likely to be disturbed.]

- ☐ Describe known work areas that may be required for specific construction activities (i.e., pole assembly, hill side construction, etc.).

☐ For each known work area, provide the area required (include length and width) and describe the types of activities that would be performed.

☐ Identify the approximate location of known work areas in the GIS database.

☐ How would the work areas likely be accessed (e.g., construction vehicles, walk in, helicopter, etc.)?

☐ If any site preparation is likely required, generally describe what and how it would be accomplished.

☐ Describe any grading activities and/or slope stabilization issues.

☐ Based on the information provided, describe how the site would be restored.

3.7.1.3 Access Roads and/or Spur Roads

☐ Describe the types of roads that would be used and or would need to be created to implement the Proposed Project. See table below as an example of information required. Road types may include, but are not limited to: new permanent road; new temporary road; existing road that would have permanent improvements; existing road that would have temporary improvements, existing paved road; existing dirt/gravel road, and overland access.

☐ For road types that require preparation, describe the methods and equipment that would be used.

☐ Identify approximate location of all access roads (by type) in the GIS database.

☐ Describe any grading activities and/or slope stabilization issues.

Type of Road	Description	Area[a] Proposed Project
Existing Dirt Road	Typically double track. May have been graded previously. No other preparation required, although a few sections may need to be re-graded and crushed rock applied in very limited areas for traction.	_____ acres
New Permanent	Would be xx feet wide, bladed. No other preparation required although crushed rock may need to be applied in very limited areas for traction.	_____ acres
Overland Access	No preparation required. Typically grassy areas that are relatively flat. No restoration would be necessary.	_____ acres

[a] Based on typical road width of _____feet.

3.7.1.4 Helicopter Access [Note: While full extent of helicopter utilization won't be ascertained until the construction contractor conducts a field review, the applicant should provide best estimates of likely helicopter utilization based on geographic and other conditions.]

☐ Identify which proposed poles/towers would be removed and/or installed using a helicopter.

- ☐ If different types of helicopters are to be used, describe each type (e.g., light, heavy or sky crane) and what activities they will be used for.
- ☐ Provide information as to where the helicopters would be staged, where they would refuel, where they would land within the Project site.
- ☐ Describe any BMPs that would be employed to avoid impacts caused by use of helicopters, for example: air quality and noise considerations.
- ☐ Describe flight paths, payloads, hours of operations for known locations and work types.

3.7.1.5 Vegetation Clearance [Note: specific amounts and types of vegetation removed may not be known until plant surveys, field reviews and project engineering are complete. However, the applicant is expected to have a reasonable estimate of the vegetation clearance required for each project based on established data available for each project area.]

- ☐ Describe what types of vegetation clearing may be required (e.g., tree removal, brush removal, flammable fuels removal) and why (e.g., to provide access, etc.).
- ☐ Identify the preliminary location and provide an approximate area of disturbance in the GIS database for each type of vegetation removal.
- ☐ Describe how each type of vegetation removal would be accomplished.
- ☐ For removal of trees, distinguish between tree trimming as required under GO-95D and tree removal.
- ☐ Describe the types and approximate number and size of trees that may need to be removed.
- ☐ Describe the type of equipment typically used.

3.7.1.6 Erosion and Sediment Control and Pollution Prevention during Construction

- ☐ Describe the areas of soil disturbance including estimated total areas, and associated terrain type and slope. List all known permits required. For project sites of less than one acre, outline the best management practices (BMPs) that would be implemented to manage surface runoff. Things to consider include, but are not limited to, the following:
  - Erosion and Sedimentation BMP's;
  - Vegetation Removal and Restoration; and/or,
  - Hazardous Waste and Spill Prevention Plans.
- ☐ Describe any grading activities and/or slope stabilization issues.
- ☐ Describe how construction waste (i.e., refuse, spoils, trash, oil, fuels, poles, pole structures, etc.) would be disposed.

3.7.1.7 Cleanup and Post-Construction Restoration

☐ Describe how cleanup and post-construction restoration would be performed (i.e., personnel, equipment, and methods). Things to consider include, but are not limited to, restoration of the following:

- Natural drainage patterns;
- Wetlands;
- Vegetation; and
- Other disturbed areas (i.e. staging areas, access roads, etc.).

3.7.2 Transmission Line Construction (Above Ground)

3.7.2.1 Pull and Tension Sites

☐ Provide the general or average distance between pull and tension sites.

☐ Provide the area of pull and tension sites, include the estimated length and width.

☐ According to the preliminary plan, how may pull and tension sites would be required, and where would they be located? Please provide the location information in GIS.

☐ What type of equipment would be required at these sites?

☐ If conductor is being replaced, how would it be removed from the site?

3.7.2.2 Pole Installation and Removal

☐ Describe how the construction crews and their equipment would be transported to and from the pole site location. Provide vehicle type, number of vehicles, and estimated number of trips and hours of operation.

Pole and Foundation Removal

☐ Describe the process of how the poles and foundations would be removed.

☐ Describe what happens to the hole that the pole was in (i.e., reused or backfilled)?

☐ If the hole is to be filled, what type of fill would be used, where would it come from?

☐ Describe any surface restoration that would occur at the pole site?

☐ Describe how the poles would be removed from the site?

Top Removal

☐ If topping is required to remove a portion of an existing transmission pole that would now only carry distribution lines, please provide the following:

- Describe the methodology to access and remove the tops of these poles.

- Describe any special methods that would be required to top poles that may be difficult to access, etc.

Pole/Tower Installation

☐ Describe the process of how the new poles/towers would be installed; specifically call out any special construction methods (e.g., helicopter installation) for specific locations or for different types of poles/towers.

☐ Describe the types of equipment and their use as related to pole/tower installation.

☐ Describe actions taken to maintain a safe work environment during construction (e.g., covering of holes/excavation pits, etc.).

☐ Describe what would be done with soil removed from a hole/foundation site.

☐ For any foundations required, provide description of construction method(s), approximate average depth and diameter of excavation, approximate volume of soil to be excavated, approximate volume of concrete or other backfill required, etc.

☐ Describe briefly how poles/towers and associated hardware are assembled.

☐ Describe how the poles/towers and associated hardware would be delivered to the site; would they be assembled off-site and brought in or assembled on site?

☐ Provide the following information about poles/tower installation and associated disturbance area estimates:

SUMMARY OF TYPICAL POLE/TOWER INSTALLATION METRICS

	Proposed Project (approximate metrics)
Pole Diameter:	
• Wood	_____ inches
• Self-Supporting Steel	_____inches
Lattice Tower Base Dimension:	
• Self-Supporting Lattice Structure	_____feet
Auger Hole Depth:	
• Wood	_____ to _____ feet
• Self-Supporting Steel	_____ to _____ feet
Permanent Footprint per Pole/Tower:	
• Wood	_____ sq. feet
• Self-Supporting Steel	_____ sq. feet
• Self-Supporting Steel Tower	_____ sq. feet
Number of Poles/Towers:	
• Wood	_____
• Self-Supporting Steel	_____
• Self-Supporting Steel Tower	_____

	Proposed Project (approximate metrics)
Average Work Area around Pole/Towers (e.g., for old pole removal and new pole installation):	
• Tangent structure work areas	_____ sq. feet
• Dead End / Angle structure work areas	_____ sq. feet
Total Permanent Footprint for Poles/Towers	Approximately _____ acres

3.7.2.3 Conductor/Cable Installation

☐ Provide a process-based description of how new conductor/cable would be installed and how old conductor/cable would be removed, if applicable. Note, graphical representation of the general sequencing is helpful for the reader here.

☐ Generally describe the conductor/cable splicing process.

☐ If vaults are required, provide their dimensions and approximate location/spacing along the alignment.

☐ Describe in what areas conductor/cable stringing/installation activities would occur.

☐ Describe any safety precautions or areas where special methodology would be required (e.g., crossing roadways, stream crossing).

3.7.3 Transmission Line Construction (Below Ground)

3.7.3.1 Trenching

☐ Describe the approximate dimensions of the trench (e.g., depth, width).

☐ Describe the methodology of making the trench (e.g., saw cutter to cut the pavement, back hoe to remove, etc.).

☐ Provide the total approximate cubic yardage of material to be removed from the trench, the amount to be used as backfill and the amount to subsequently be removed/disposed of off-site.

☐ Provide off-site disposal location, if known, or describe possible option(s).

☐ If engineered fill would be used as backfill, provide information as to the type of engineered backfill and the amount that would be typically used (e.g., the top two feet would be filled with thermal-select backfill).

☐ Describe if dewatering would be anticipated, if so, how the trench would be dewatered, what are the anticipated flows of the water, would there be treatment, and how would the water be disposed.

- ☐ Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants that could be exposed as a result of trenching operations.
- ☐ If a pre-existing hazardous waste were encountered, describe the process of removal and disposal.
- ☐ Describe any standard BMPs that would be implemented.

3.7.3.2 Trenchless Techniques: Microtunnel, Bore and Jack, Horizontal Directional Drilling

- ☐ Provide the approximate location of the sending and receiving pits.
- ☐ Provide the length, width and depth of the sending and receiving pits.
- ☐ Describe the methodology of excavating and shoring the pits.
- ☐ Describe the methodology of the trenchless technique.
- ☐ Provide the total cubic yardage of material to be removed from the pits, the amount to be used as backfill and the amount to subsequently be removed/disposed of off-site.
- ☐ Describe process for safe handling of drilling mud and bore lubricants.
- ☐ Describe process for detecting and avoiding "fracturing-out" during HDD operations.
- ☐ Describe process for avoiding contact between drilling mud/lubricants and stream beds.
- ☐ If engineered fill would be used as backfill, provide information as to the type of engineered backfill and the amount that would be typically used (e.g., the top two feet would be filled with thermal-select backfill).
- ☐ Describe if dewatering would be anticipated, if so, how the pit would be dewatered, what are the anticipated flows of the water, would there be treatment, and how would the water be disposed.
- ☐ Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants.
- ☐ If a pre-existing hazardous waste were encountered, describe the process of removal and disposal.
- ☐ Describe any grading activities and/or slope stabilization issues.
- ☐ Describe any standard BMPs that would be implemented.

3.7.4 Substation Construction

- ☐ Describe any earth moving activities that would be required; what type of activity and, if applicable, estimate cubic yards of materials to be reused and/or removed from the site For both site grading and foundation excavation.

☐ Provide a conceptual landscape plan in consultation with the municipality in which the substation is located.

☐ Describe any grading activities and/or slope stabilization issues.

☐ Describe possible relocation of commercial or residential property, if any.

3.7.5 Construction Workforce and Equipment

[Note: in the absence of project specific data, provide estimates based on past projects of a similar size and type.]

☐ Provide the estimated number of construction crew members.

☐ Describe the crew deployment, would crews work concurrently (i.e., multiple crews at different sites); would they be phased, etc.

☐ Describe the different types of activities to be undertaken during construction; the number of crew members for each activity i.e. trenching, grading, etc.; and number and types of equipment expected to be used for said activity. Include a written description of the activity. See example below.

TRANSMISSION LINE CONSTRUCTION
ESTIMATED PERSONNEL AND EQUIPMENT

Activity	People	Quantity of Equipment
Survey	3	1 pickup truck
Access Road Construction	2 to 3	1 bulldozer (D-8 Cat) 1 motor grader 1 pickup truck 1 water truck (for construction)
Auger Holes, Direct Embed Poles	5	1 hole digger 1 backhoe or bucket excavator 1 water truck 1 pickup truck 1 line truck
Material Haul	3	1 tractor/trailer 2 yard and field cranes or line trucks 1 fork lift
Structure Assembly, Per Crew 2 Crews Required	4	1 pickup truck 1 truck (2 ton)
Structure Erection, Per crew 2 Crews Required (includes old pole removal)	4	1 truck (2 ton) 1 pickup truck 1 bucket truck 1 line truck
Wire Installation (includes old conductor removal)	8	1 wire reel trailer 1 diesel tractor 1 Crane

Activity	People	Quantity of Equipment
		1 line truck 3 pickup trucks 2 bucket trucks 2 3-drum pullers 1 single drum puller (large) 1 double bull-wheel tensioned (heavy)
Right-of-Way Restoration and Cleanup	4	1 Truck 1 motor grader 1 pickup truck 1 water truck

☐ Provide a list of the types of equipment expected to be used during construction of the Proposed Project as well as a brief description of the use of the equipment. See example below.

EQUIPMENT EXPECTED TO BE USED DURING PROJECT CONSTRUCTION

Type of Equipment	Use
• Bucket Truck (i.e. Cherry Picker) • Crane • Backhoe or Bucket Excavator • Crew-Cab Truck/Pick-Ups • Diesel Tractor • Dump Truck • Fork Lift • Grooming/Grading Equipment: – dozer – water truck – motor grader • Hole Auger/Truck Auger • Line Truck and Trailer	• Lift and transport workers • Erect pole structures, lift and transport heavy construction items • Transport personnel, tools, and materials • Pull pole trailer for multi-pole loads • Haul material • Lift and transport heavy construction items • Road construction (staging, pull sites) – move/compact soils – compaction and dust control – to properly pitch road for run-off • Excavate holes • Haul conductor, poles, equipment, materials, and people, and to install pole/conductor
• Mobile Offices • Pullers, Reel Dolly • Tensioned • Tractor/Trailer • Two-Ton Truck • Static Wire Reel Trailer	• Supervision and clerical office • Install conductor • Install and move conductor • Haul materials, equipment, tools, etc. • Haul materials • Transport reels of conductor

3.7.6 Construction Schedule

☐ Provide a Preliminary Project Construction Schedule; include contingencies for weather, wildlife closure periods, etc. See example below.

PROPOSED CONSTRUCTION SCHEDULE

Project Activity	**Proposed Project** (Month Year **or** Month Year to Month Year)
Permit To Construct decision adopted and effective	_____
Acquisition of required permits	_____
Right-of-way / property acquisition	_____
Final engineering completed	_____
Construction begins	_____
Transmission line construction	_____
Temporary Substation Construction	_____
Substation construction	_____
Project operational	_____
Clean up	_____

3.8 Operation and Maintenance

☐ Describe the general system monitoring and control (i.e., use of standard monitoring and protection equipment, use of circuit breakers and other line relay protection equipment, etc.).

☐ Describe the general maintenance program of the Proposed Project, include items such as:

- Timing of the inspections (i.e., monthly, every July, as needed);
- Type of inspection (i.e., aerial inspection, ground inspection); and
- Description of how the inspection would be implemented. Things to consider, who/how many crew members; how would they access the site (walk to site, vehicle, ATV); would new access be required; would restoration be required, etc.

☐ If additional full time staff would be required for operation and/or maintenance, provide the number and for what purpose.

3.9 Applicant Proposed Measures

☐ If there are measures that the Applicant would propose to be part of the Proposed Project, please include those measures and reference plans or implementation descriptions.

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Chapter 4: Environmental Setting

Note: The discussion of Environmental Setting may be combined within each resource area in the Environmental Assessment Summary.

☐ For each resource area discussion, the PEA must include the following:

- A description of the physical environment in the vicinity of the project (e.g. topography, land use patterns, biological environment, etc.)
  - local environment (site-specific)
  - regional environment
- A description of the regulatory environment/context
  - Federal
  - State
  - Local

☐ Detailed descriptions should be limited to those resource areas which may be subject to a potentially significant impact.

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Chapter 5: Environmental Impact Assessment Summary

Using the California Environmental Quality Act Guidelines, Appendix G as guidance, assess the potential environmental impacts (e.g., No Impact, Less than Significant, Less than Significant with Mitigation and/or Significant Unavoidable) of the Proposed Project's construction, operation and maintenance activities. See below for information that should be used in this assessment. See Chapter 6 in regards to proposed mitigation measures.

5.1 Aesthetics

☐ Provide visual simulations of prominent public view locations, including scenic highways to demonstrate the before and after project implementation. Additional simulations of affected private view locations are highly recommended.

5.2 Agriculture Resources

☐ Identify the types of agricultural resources affected.

5.3 Air Quality

☐ Provide supporting calculations / spreadsheets / technical reports that support emission estimates in the PEA.

☐ Provide documentation of the location and types of sensitive receptors that could be impacted by the project (e.g., schools, hospitals, houses, etc.). Critical distances to receptors is dependant on type of construction activity.

☐ Identify Project Green House Gas (GHG) emissions.

- Every project will quantify GHG emissions from a business as usual snapshot. That is, what the GHG emissions will be from the proposed project if no mitigations were used.
- Every project will quantify GHG emission reductions from every Applicant Proposed Measure that is implemented. The quantifications will be itemized and placed in a table format.
- Every project will identify the net emissions of a project after mitigations have been applied.

- Applicant will calculate and quantify GHG emissions (CO2equivalent) for the project including construction & operation.
- Applicant will calculate and quantify the GHG reduction based on reduction measures proposed for the project.
- Applicant will propose Applicant Proposed Measures (APM) to implement and follow to maximize GHG reductions. If sufficient, CPUC will accept them without adding further mitigation measures.
- Applicant will discuss programs already in place to reduce GHG emissions on a system wide level. This includes Applicant's voluntary compliance with USEPA SF6 reduction program, reductions from energy efficiency, demand response, LTPP, et al.

☐ The assessment of air quality impacts must be consistent with PEA Sections 3.7.5 and 3.7.6, as well as with the PEA's analysis of impacts during construction, including traffic and all other emissions.

5.4 Biological Resources

In addition to an impacts analysis:

☐ Provide a copy of the Wetland Delineation and supporting documentation (i.e., data sheets). If verified, provide supporting documentation. Additionally, GIS data of the wetland features should be provided as well.

☐ Provide a copy of special status surveys for wildlife, botanical and aquatic species, as applicable. Any GIS data documenting locations of special-status species should be provided.

5.5 Cultural Resources

In addition to an Impacts Analysis:

☐ Cultural Resources Report documenting a cultural resources investigation of the Proposed Project. This report should include a literature search, pedestrian survey, and Native American consultation.

☐ Provide a copy of the records found in the literature search.

☐ Provide a copy of all letters and documentation of Native American consultation.

5.6 Geology, Soils, and Seismic Potential

In addition to an impacts analysis:

☐ Provide a copy of geotechnical investigation if completed, including known and potential geologic hazards such as ground shaking, subsidence, liquefaction, etc.

5.7 Hazards and Hazardous Materials [Note: reference and list the documents that apply:]

In addition to an impacts analysis:

☐ Environmental Data Resources report.

☐ Hazardous Substance Control and Emergency Response Plan.

☐ Health and Safety Plan.

☐ Worker Environmental Awareness Program (WEAP).

☐ Describe what chemicals would be used during construction and operation of the Proposed Project. For example: fuels, etc. for construction, naphthalene to treat wood poles before installation.

5.8 Hydrology and Water Quality

In addition to an impacts analysis:

☐ Describe impacts to groundwater quality including increased run-off due to construction of impermeable surfaces, etc.

☐ Describe impacts to surface water quality including the potential for accelerated soil erosion, downstream sedimentation, and reduced surface water quality.

5.9 Land Use and Planning

In addition to an impacts analysis:

☐ Provide GIS data of all parcels within 300’ of the Proposed Project with the following data: APN number, mailing address, and parcel’s physical address.

5.10 Mineral Resources

Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.

5.11 Noise

☐ Provide long term noise estimates for operational noise (e.g., corona discharge noise, and station sources such as substations, etc.).

5.12 Population and Housing

Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.

5.13 Public Services

Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.

5.14 Recreation

Data needs already specified under Chapter 3 would generally meet the data needs for this resource area.

5.15 Transportation and Traffic [Note: the traffic impact assessments should be based on likely or probable routes.]

☐ Discuss traffic impacts resulting from construction of the Proposed Project including ongoing maintenance operations.

☐ Provide a preliminary description of the traffic management plan that would be implemented during construction of the Proposed Project.

5.16 Utilities and Services Systems

☐ Describe how treated wood poles would be disposed of after removal, if applicable.

5.17 Cumulative Analysis

☐ Provide a list of projects (i.e., past, present and reasonably foreseeable future projects) within the Project Area that the applicant is involved in.

☐ Provide a list of projects that have the potential to be proximate in space and time to the Proposed Project. Agencies to be contacted include but are not limited to: the local planning agency, Caltrans, etc.

5.18 Growth-Inducing Impacts, If Significant

☐ Provide information on the Proposed Project's growth inducing impacts, if any. The information should include, but is not necessarily limited, to the following:

- Any economic or population growth, in the surrounding environment that will directly or indirectly, result from the Proposed Project.

- Any increase in population that could further tax existing community service facilities (i.e., schools, hospitals, fire, police, etc.), that will directly or indirectly result from the Proposed Project.
- Any obstacles to population growth that the Proposed Project would remove.
- Any other activities, directly or indirectly encouraged or facilitated by the Proposed Project that would cause population growth that could significantly affect the environment, either individually or cumulatively.

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Chapter 6: Detailed Discussion of Significant Impacts

For project impacts that could be potentially significant, the PEA must discuss the following:

6.1 Mitigation Measures Proposed to Minimize Significant Effects

☐ Within the Environmental Impact Assessment Summary, for impacts where a number of mitigation measures are available to reduce impacts, each mitigation measure should be discussed and the basis for selecting a particular mitigation measure should be stated.

6.2 Description of Project Alternatives and Impact Analysis

☐ Provide a summary of the alternatives considered that would meet most of the objectives of the Proposed Project and an explanation as to why they were not chosen as the Proposed Project.

☐ Alternatives considered and described by the Applicant should include, as appropriate:

- System or facility alternatives
- Route alternatives
- Route variations
- Alternative locations.

☐ A description of a "No Project Alternative" should be included.

☐ If significant environment effects are assessed, the discussion of alternatives shall include alternatives capable of substantially reducing or eliminating any said significant environmental effects, even if the alternative(s) substantially impede the attainment of the project objectives, and are more costly.

6.3 Growth-Inducing Impacts

☐ Information required to analyze the Proposed Project's effects on growth would vary depending on the type of project proposed. Generally, for transmission line projects the discussion would be fairly succinct and focus on the following:

- Would the Proposed Project foster economic or population growth, either directly or indirectly, in the surrounding environment?
- Would the Proposed Project cause an increase in population that could further tax existing community service facilities (i.e., schools, hospitals, fire, police, etc.)?
- Would the Proposed Project remove obstacles to population growth?
- Would the Proposed Project encourage and facilitate other activities that would cause population growth that could significantly affect the environment, either individually or cumulatively?

6.4 Suggested Applicant Proposed Measures to address GHG Emissions

☐ A menu of suggested APM's that applicants can consider. Applicants can and are encouraged to propose other GHG reducing mitigations. Priority is given to on-site and/or near by mitigation measures. Off-site mitigation measures within California will be considered.

1. If suitable park-and-ride facilities are available in the Project vicinity, construction workers will be encouraged to carpool to the job site to the extent feasible. The ability to develop an effective carpool program for the Proposed Project would depend upon the proximity of carpool facilities to the job site, the geographical commute departure points of construction workers, and the extent to which carpooling would not adversely affect worker show-up time and the Project's construction schedule.
2. To the extent feasible, unnecessary construction vehicle and idling time will be minimized. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel powered vehicles, have extended warm-up times following start-up that limit their availability for use following startup. Where such diesel powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The Proposed Project will apply a "common sense" approach to vehicle use; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a "common sense" approach to vehicle use.
3. **Use low-emission construction equipment**. Maintain construction equipment per manufacturing specifications and use low-emission equipment described here. All off-road construction diesel engines not registered under the CARB Statewide Portable Equipment Registration Program shall meet at a minimum the Tier 2 California Emission Standards for Off-Road Compression-Ignition Engines as specified in California Code of Regulations, Title 13, Sec. 2423(b)(1).

4. Diesel Anti-Idling: In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.
5. Alternative Fuels: CARB would develop regulations to require the use of 1 to 4 percent biodiesel displacement of California diesel fuel.
6. Alternative Fuels: Ethanol, increased use of ethanol fuel
7. Green Buildings Initiative
8. Facility wide energy efficiency audit.
9. Complete greenhouse gas emissions audit. The audit will include a review of the greenhouse gases emitted from those facilities (substations), including carbon dioxide, methane, CFC and HFC compounds, (SF6).
10. There is an EPA approved SF6 emissions protocol. http://www.epa.gov/electricpower-sf6/resources/index.html#three
11. SF6 program wide inventory. For substations keep inventory of leakage rates.
12. Increase replacement of breakers once leakage rates exceed 1% within 30 days of detection.
13. Increased investment in current programs that can be verified as being in addition to what the utility is already doing.
14. The *SF6 Emission Reduction Partnership for the Electric Power Systems* was launched in 1999 and currently includes 57 electric utilities and local governments across the U.S. SF6 is used by this industry in a variety of applications, including that of dielectric insulating material in electrical transmission and distribution equipment such as circuit breakers. Electric power systems that join the Partnership must, within 18 months, establish an emission reduction goal reflecting technically and economically feasible opportunities within their company. They also agree to, within the constraints of economic and technical feasibility, estimate their emissions of SF6, establish a strategy for replacing older, leakier pieces of equipment, implement SF6 recycling, establish and apply proper handling techniques, and report annual emissions to EPA.EPA works as a clearinghouse for technical information, works to obtain commitments from all electric power system operators and will be sponsoring an international conference in 2000 on SF6 emission reductions.
15. Quantify what comes into the system and track programmatically SF6.
16. Applicant can propose other GHG reducing mitigations.

PEA CHECKLIST FOR TRANSMISSION LINE AND SUBSTATION PROJECTS

Chapter 7: Other Process-Related Data Needs

☐ Excel spreadsheet that includes all parcels within 300 feet of any project component with the following data: APN number, owner mailing address, and parcels physical address. [Note: notice of all property owners within 300 feet is required under GO 131-D.]